Release Version 1.0

SeeEyes®

UTP Active Auto Level Adjustment Receiver

SC-TP0404, SC-UR0412A(S), SC-UT0412A6
SC-UR0418A(H), SC-UR0818A, SC-UR1618A

User's Manual

SC-TP0404
SC-UR0412A(S)
SC-UT0124A6

SC-UR0418A(H)
SC-UR0818A
SC-UR1618A

SeeEyes Co., Ltd.

Precaution and Safety Guidelines

Please read this user's manual thoroughly prior to use the unit for its easy and convenient use.

- Do not install the product in the following places: extremely low or high temperature conditions; places exposed to rain, snow, or high humidity; places containing or exposed to oil and gas; places exposed to vibration and shock; places under direct sunlight or exposed to outdoor weather conditions; places exposed to radio waves (RF) or near to power lines. It may cause low performance or malfunction of the unit.
- Do not disassemble the unit and do not insert any foreign objects inside the unit. It may cause malfunction or damage to the unit.
- To reduce the risk of fire or electric shock, please be careful on electric shock when using the unit.
- Please using only power supply units or equipment corresponding to the unit in order to avoid any fire risk or or malfunction of the unit.
- The optimum ambient temperature for the use of the Device is -10℃ ~ 50℃, and it needs to be careful when the Device is used for both inside and outside the building.
- Should be careful not to have the lines changed when connecting them.
- When you connect the operating power line to the Camera, you should confirm if the Camera uses AC or DC power, and for the case of DC power then you should be careful not to have the polarity changed to the wrong one (If you connect the AC Adapter to Transmitter, and connect the DC Adapter to the Receiver, then it would cause a breakdown).
- Please turn on the switch for power supply after confirming the insulation condition of the control cable connected from the outside.
- Giving a strong vibration or impact to the Device could cause a breakdown, therefore adequate precautions should be taken when installing or using the Device.
- Do not use the device when any smoke or smell is produced from the unit. It may be subject to fire or electric shock. If any smoke or smell is produced, please turn off the unit and remove the power cable immediately, and contact your distributor to check the device properly.
- If the power is not ON, please check whether the power cable is connected correctly or not.
- If the device is not working properly, please contact your distributor.

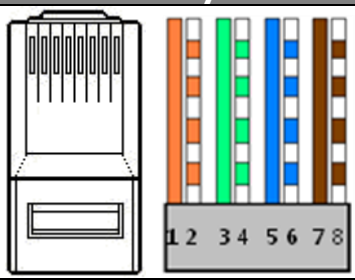
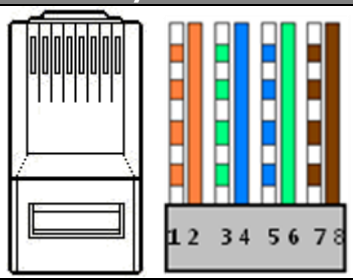
How to connect the UTP cable

- 4Pairs of UTP cable Wiring System

NO	SeeEyes		TIA / EIA 568B	
1		Orange		White & Orange
2		White & Orange		Orange
3		Green		White & Green
4		White & Green		Blue
5		Blue		White & Blue
6		White & Blue		Green
7		Brown		White & Brown
8		White & Brown		Brown

- Please note that the SeeEyes UTP cable wiring method is different from TIA/EIA 568B method.

- RJ-45 JACK Wiring

SeeEyes	TIA / EIA 568B
	

- Please note that SeeEyes RJ-45 Wiring method is different from TIA/EIA 568B.

- When using the Junction Box (UTP power supply unit), connect the UTP cable as below.

Cable #		Camera	Receiver or DVR
1		VIDEO (+)	CAMERA 1 (+)
2		VIDEO (-)	CAMERA 1 (-)
3		RS-485 (+)	CAMERA 2 (+)
4		RS-485 (-)	CAMERA 2 (-)
5		CAMERA POWER (+)	CAMERA 3 (+)
6		CAMERA POWER (+)	CAMERA 3 (-)
7		CAMERA POWER (-)	CAMERA 4 (+)
8		CAMERA POWER (-)	CAMERA 4 (-)

1. Introduction

1-1. Overview

Automatic Level adjustment Active type UTP transmission system is composed of a Transmitter (Camera side), [SC-TP0404 and SC-UT0124A6], and Receivers (DVR side), [SC-UR0412A(S)/ SC-UR0418A(H)/ SC-UR0818A/ SC-UR1618A]. Using this solution, it is possible to transmit video signals for long distance (up to 1.2 Km with Passive balun) over Cat.5 UTP cable. Also due to its automatic video level adjustment function, it is no necessary to adjust gains for the optimum video.

※ SC-UR0412A(S), SC-UR0418A(H), SC-UR0818A, SC-UR1618A can be used with other UTP Transmitters but it is recommended to compose the products as below Product Combination (**Refer to No.2-2**)

1-2. Features

- Active type UTP Transmission product with excellent Noise isolation function
- Automatic video level adjustment (SC-UR0412A(S), UR0418A(H), UR0818A, UR1618A)
- Using Passive Balun as Transmitter, it transmits video signal up to 1.2 Km over CAT. 5
- Dual video outputs (SC-UR0418A(H), UR0818A, UR1618A)
- Surge protection function (SC-UR0412A(S), UR0418A(H), UR0818A, UR1618A)

2. Components

2-1. Components By model

Model	Tx.	Rx.	Power	Image	Rack mount bracket	Power Cord, Adaptor	Manual
SC-UT0124A6	○		○				
SC-TP0404	○						
SC-UR0412A(S)		○					
SC-UR0418A(H)		○					
SC-UR0818A		○					

SC-UR1618A		○					

2-2. Optimum combination

Below combination table is recommended for optimum performance when composing the transmitter and receiver.

SC-TP0404

Tx		Rx.	Max. Distance
SC-TP0404		SC-UR0412A(S)	1200m
		SC-UR0418A(H)	1200m
		SC-UR0818A	
		SC-UR1618A	

Passive Balun Transceiver

Tx		Rx.	Max. Distance
SC-TP0104LD SC-TP0104C		SC-UR0412A(S)	1200m
		SC-UR0418A(H)	
		SC-UR0818A	
		SC-UR1618A	

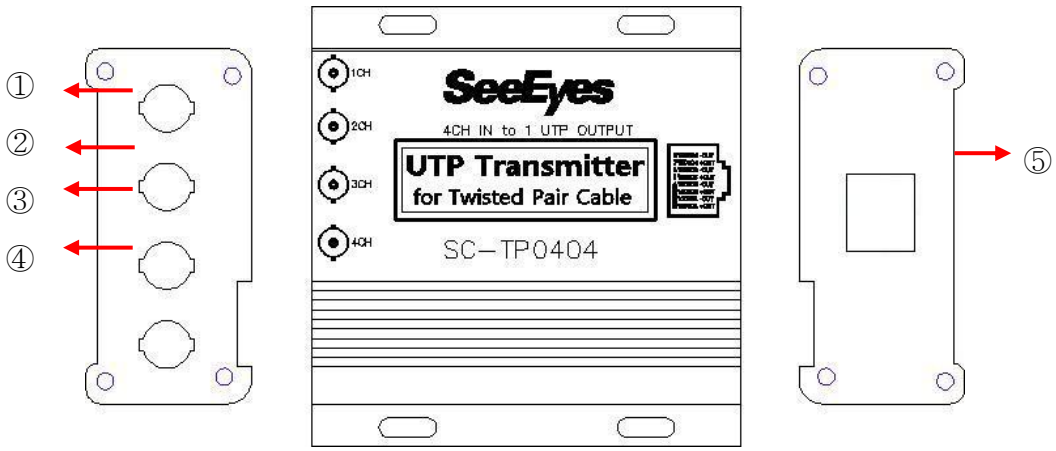
SC-UT0124A6

Tx		Rx.	Max. Distance
SC-UT0124A6		SC-UR0412A(S)	1.2 Km
		SC-UR0418A(H)	1.8 Km
		SC-UR0818A	
		SC-UR1618A	

3. Product Parts and Peripheral Device Connection

3-1. Part Names and Functions

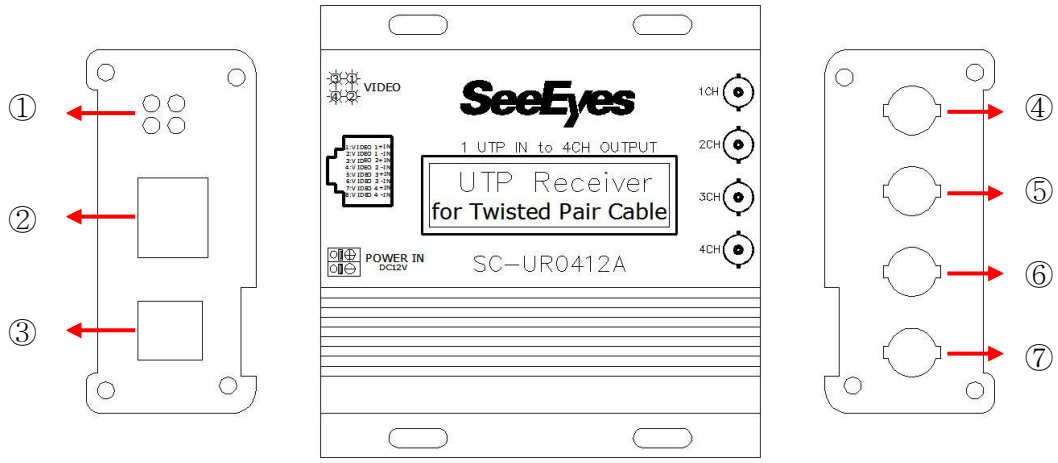
3-1-1. SC-TP0404



① ~ ④ BNC: VIDEO INPUT (4 x BNC / 1~4 Channel)

⑤ RJ-45 JACK: VIDEO OUTPUT (1 x RJ-45 / 4 channel)

3-1-2. SC-UR0412A



① VIDEO LED: Indicate video status for each channel.

LED	Status
Flickering	NO VIDEO
On	VIDEO IN

② RJ-45 JACK: VIDEO INPUT

③ POWER IN: DC 12V / 0.3A(DC 12V/0.5A Adapter)

④ ~ ⑦ BNC-F: 1~4 Channel VIDEO OUTPUT

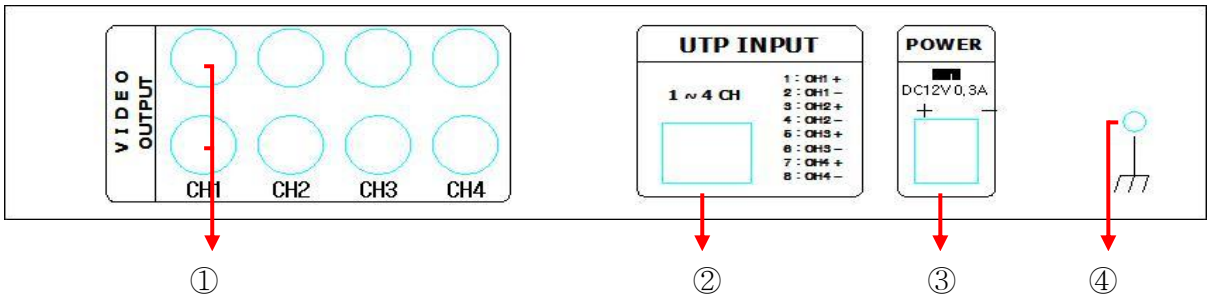
3-1-3. SC-UR0418AH

3-1-3-1. Front Side

LED	Status
Flickering	NO VIDEO
On	VIDEO IN

It turns on the LED when the video signals are connected.

3-1-3-2. Rear Side



① VIDEO OUT
- Outputs video signal (BNC-F) which received from UTP cable
- Dual video outputs (2 BNC-F per each Channel)

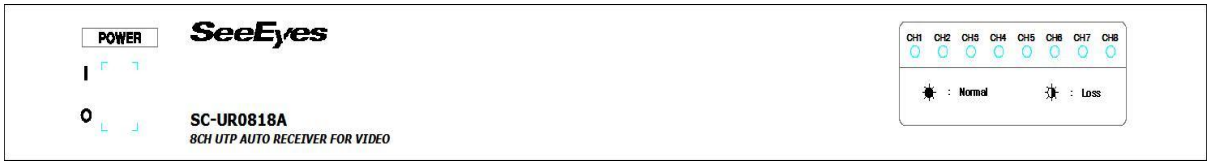
② UTP INPUT
- 4P UTP CABLE connection port
- Inputs video signals from 4 cameras

Cable No.	1	2	3	4	5	6	7	8
Function	CH1 +	CH 1 -	CH 2 +	CH 2 -	CH 3 +	CH 3 -	CH 4 +	CH 4 -

③ POWER INPUT: 2P Terminal Block
– DC 12V / 0.3A(DC 12V/0.5A Adapter)

④ GND Port: External GND connection port

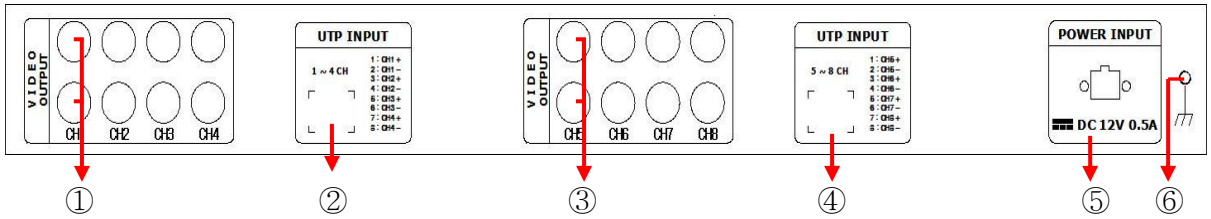
3-1-4. SC-UR0818A
3-1-4-1. Front Side



LED	Status
Flickering	NO VIDEO
On	VIDEO IN

It turns on the LED when the video signals are connected.

3-1-4-2. Rear Side



①, ③ VIDEO OUT
- Outputs video signal (BNC-F) which received from UTP cable
- Dual video outputs (2 BNC-F per each Channel)

② UTP INPUT
- 4P UTP CABLE connection port
- Inputs video signals from 4 cameras (1~4 Channel)

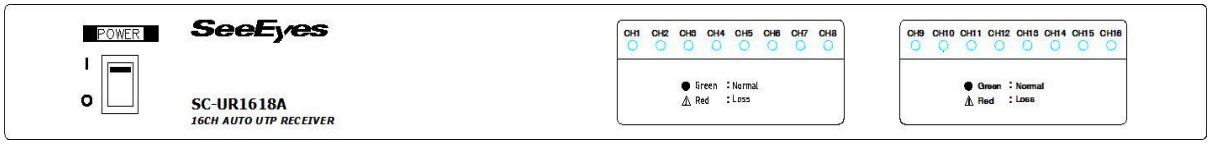
Cable No.	1	2	3	4	5	6	7	8
Function	CH1 +	CH 1 -	CH 2 +	CH 2 -	CH 3 +	CH 3 -	CH 4 +	CH 4 -

④ UTP INPUT
- 4P UTP CABLE connection port
- Inputs video signals from 4 cameras (5~8 Channel)

Cable No.	1	2	3	4	5	6	7	8
Function	CH1 +	CH 1 -	CH 2 +	CH 2 -	CH 3 +	CH 3 -	CH 4 +	CH 4 -

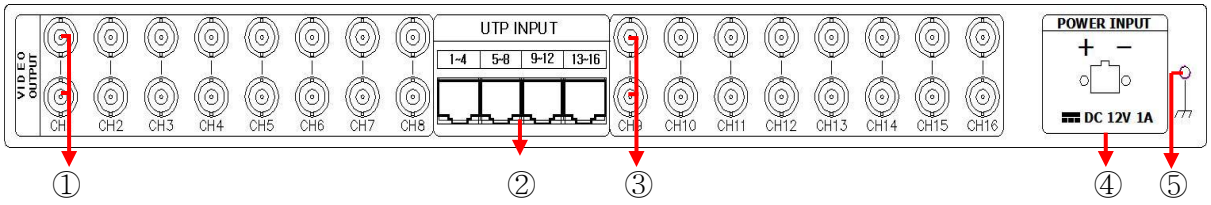
⑤ POWER INPUT: 2P Terminal Block
– DC 12V / 0.5A(DC 12V/1.0A Adapter)
⑥ GND Port: External GND connection port

3-1-5. SC-UR1618A
3-1-5-1. Front Side



LED	Status
Flickering	NO VIDEO
On	VIDEO IN

3-1-5-2. Rear Side



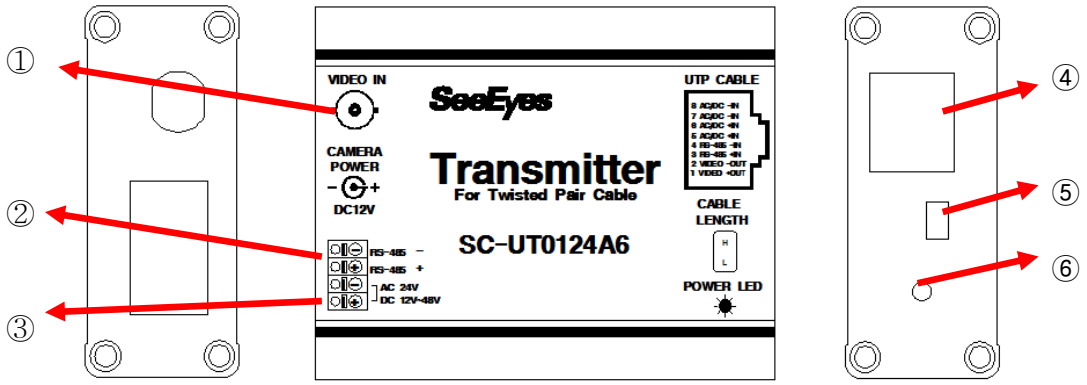
①, ③ VIDEO OUT
- Outputs video signal (BNC-F) which received from UTP cable
- Dual video outputs (2 BNC-F per each Channel)

② UTP INPUT
- 4P UTP CABLE connection port
- Inputs video signals from 16 cameras (1~16 Channel)

Cable No.	1	2	3	4	5	6	7	8
Function	CH1 +	CH 1 -	CH 2 +	CH 2 -	CH 3 +	CH 3 -	CH 4 +	CH 4 -

④ POWER INPUT: 2P Terminal Block
– DC 12V/1A(DC 12V/1.5A Adapter)
⑤ GND Port: External GND Connection port

3-1-6. SC-UT0124A6



① VIDEO INPUT & CAMERA POWER: Connect to the Video output port in Camera side. This port supplies power to the Camera(Do not connect to the camera which needs an separate battery.)

②RS-485: RS-485 DATA Connection port(Be careful the polarity when you connect)

③POWER IN: Using when you connect Extra ADAPTER

(Do not connect when you supply power using Receiver / Junction Box)

④UTP CABLE: Connect UTP CABLE attached RJ-45 Plug.

⑤CABLE LENGTH: Adjust the S/W depending on the length of UTP CABLE.

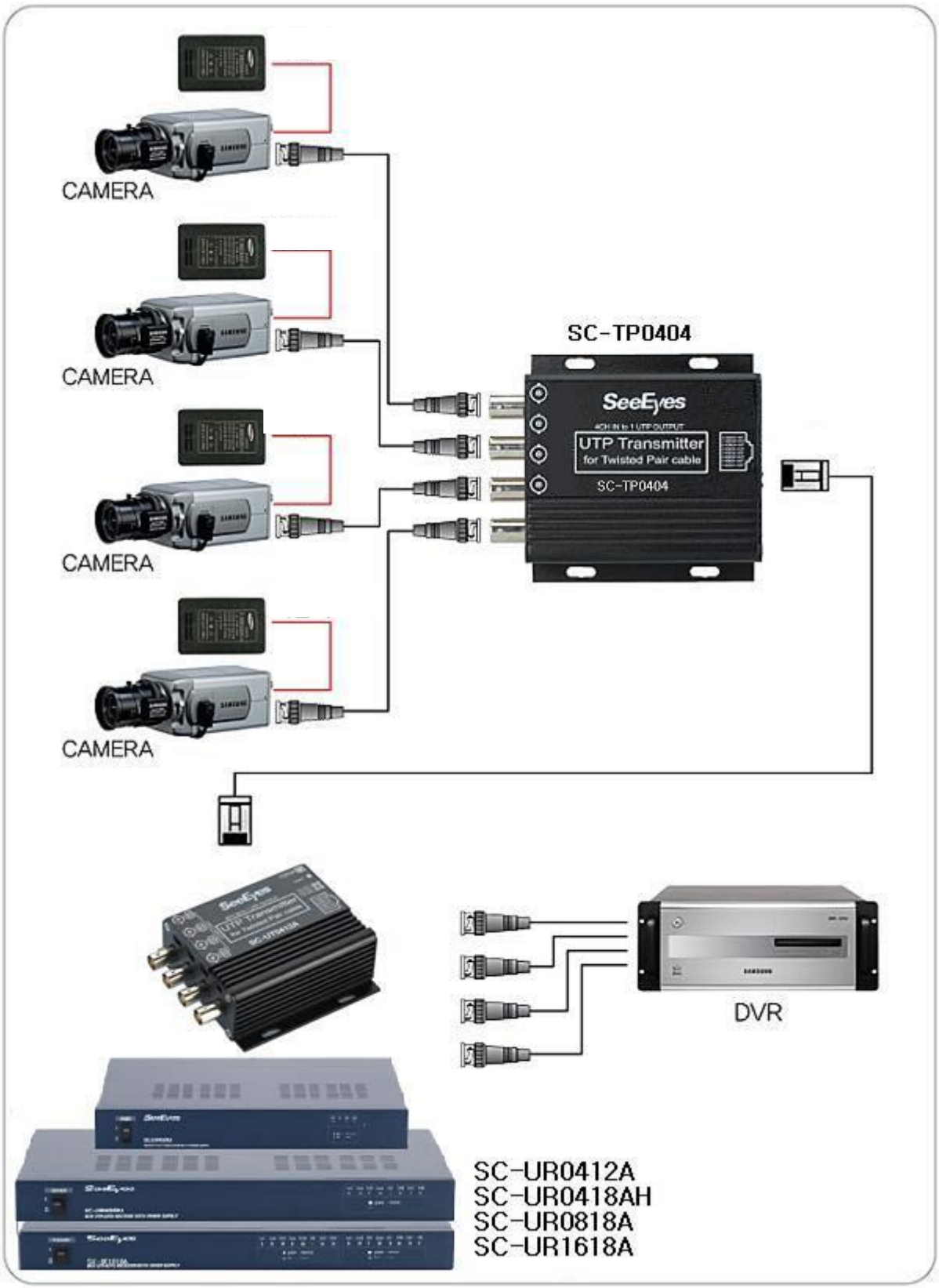
Max. Transmission distance: L: Under 900m / H: 900~2.4Km

(Transmission distance is vary depending on the cable condition)

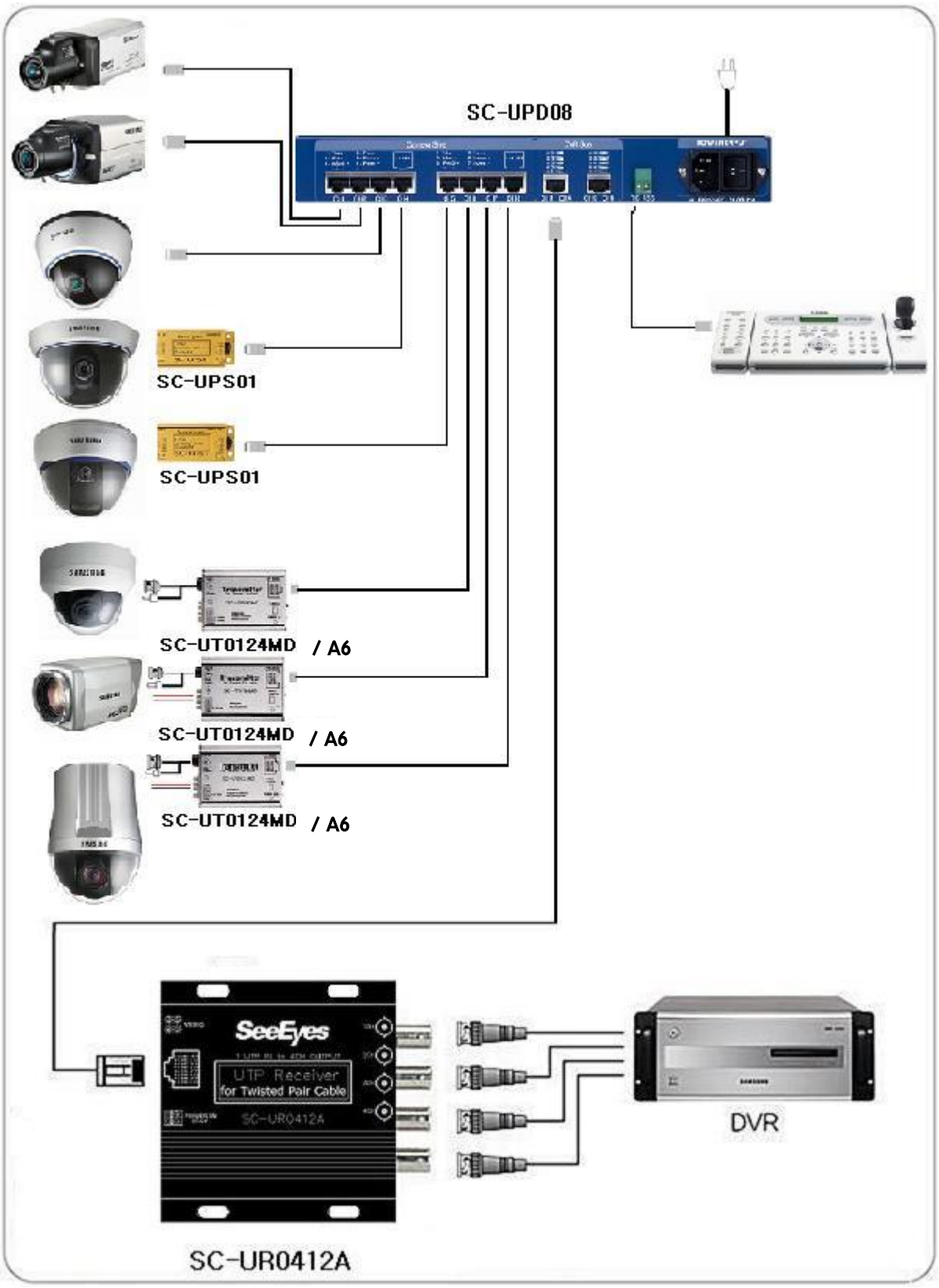
⑥POWER LED: Light on when power is supplied to the SC-UT0124A6.

4. Connection Diagram

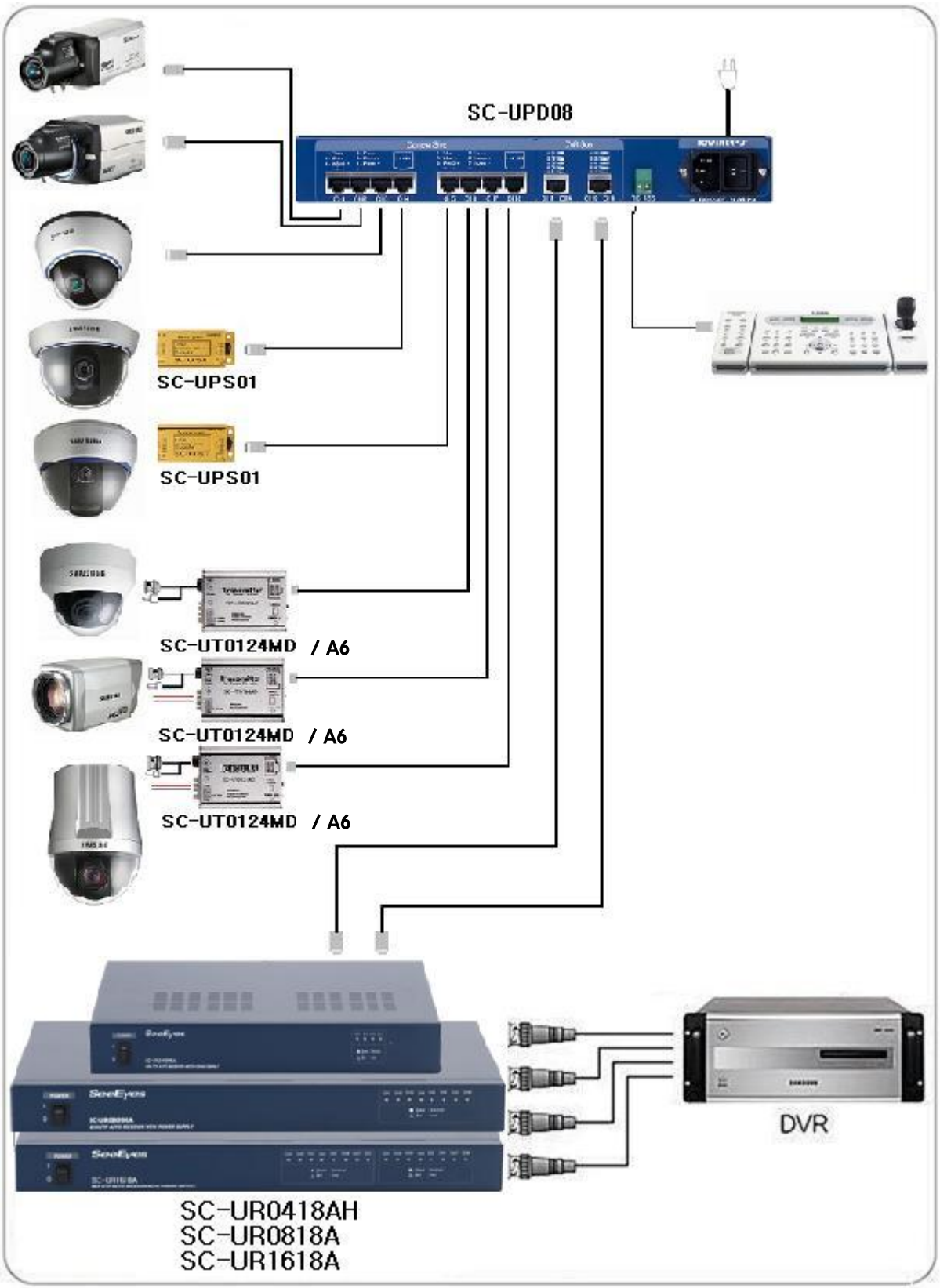
4-1. SC-TP0404



4-2. SC-UR0412A



4-3. SC-UR0418AH/ SC-UR0818A/ SC-UR1618A



5. SPECIFICATION

Model		SC-TP0404(4Ch Transceiver)
Video In		CVBS 1.0Vp-p, 75Ω
Video Out		Balanced Difference Signal
Max. Distance(CAT 5)		400m
Connection Port	Video In	BNC-F
	Video Out	RJ-45
Temp./ Humidity		-10℃ ~ +50℃ / 0 ~ 80%
Case / Weight		Aluminum / 240g
Dimension		93(W) x 92(H) x 35(D)mm

Model		SC-UT0412A6 (1 Ch transmitter [built-in Down Converter])
Video In		CVBS 1.0Vp-p, 75Ω
Video Out		51Ω1Vp-p ~ 8Vp-p
Power Input		Power supply device(SC-UPD08, JPDXX) Power(DC 48V) Adapter : AC 24V, DC 12~48V
Bandwidth		1.8Km : 6MHz
Max. Distance(CAT 5)		Low: Under 900m, High: 900m~2.4Km
Connection Port	Video In	-M & BNC-M Harness Cable(45Cm)
	Video Out	RJ-45
	Data/Power	DATA: 4P Terminal Block(2P Data/ 2P Power)
Temp./ Humidity		-10℃~ +50℃/ 0 ~ 80%
Case / Weight		Aluminum / 120g
Dimension		78(W) x 60(H) x 25(D)mm

Model		SC-UR0412A(4Ch Auto Receiver)
Video In		51Ω 1Vp-p ~ 1.6Vp-p
Video Out		CVBS 1.0Vp-p, 75Ω
Power Input		DC 12V 0.5A (Adaptor Included)
Power Consumption		3.6W(MAX)
Video Adjustment		Auto Control
Max. Distance(CAT 5)		Passive Type: 1 Km, Active Type: 1.2Km
Connection Port	Video In	RJ-45
	Video Out	BNC-F
Temp./ Humidity		-10℃ ~ +50℃ / 0 ~ 80%
Case / Weight		Aluminum / 240g
Dimension		93(W) x 92(H) x 35(D)mm

Model	SC-UR0418AH(4Ch Auto Receiver)

Video In		51Ω 1Vp-p ~ 1.6Vp-p
Video Out		CVBS 1.0Vp-p, 75Ω
Power Input		DC 12V 0.5A (Adaptor Included)
Power Consumption		2.6 W(MAX)
Bandwidth		
Video Adjustment		Auto Control
Max. Distance(CAT 5)		Passive Type: 1 Km, Active Type: 1.8Km
Connection Port	Video In	RJ-45
	Video Out	BNC-F
Temp./ Humidity		-10℃ ~ +50℃ / 0 ~ 80%
Case / Weight		Steel / 1.4kg
Dimension		220(W) x 44(H) x 190(D)mm

Model		SC-UR0818A(8Ch Auto Receiver)
Video In		51Ω 1Vp-p ~ 1.6Vp-p
Video Out		CVBS 1.0Vp-p, 75Ω
Power Input		DC 12V 1A (Adaptor 제공)
Power Consumption		5.3 W(MAX)
Bandwidth		
Video Adjustment		Auto Control
Max. Distance(CAT 5)		Passive Type: 1 Km, Active Type: 1.8Km
Connection Port	Video In	RJ-45
	Video Out	BNC-F
Temp./ Humidity		-10℃ ~ +50℃ / 0 ~ 80%
Case / Weight		Steel / 2.3kg
Dimension		430(W) x 44(H) x 250(D)mm

Model		SC-UR1618A(16Ch Auto Receiver)
Video In		51Ω 1.0Vp-p ~ 2.5Vp-p
Video Out		CVBS 1.0Vp-p, 75Ω
Power Input		DC12V 1.0A Adaptor included
Power Consumption		0.9A(MAX)
Bandwidth		5MHz
Video Adjustment		Automatic
Max. Distance(CAT 5)		Passive Type: 1 Km, Active Type: 1.8Km
Connection Port	Video In	RJ45
	Video Out	BNC-F
Temp./ Humidity		-10℃ ~ +50℃ / 0 ~ 80%
Case / Weight		STEEL/2.7Kg
Dimension		430(W) x 44(H) x 250(D)mm

6. Warranty Certificate

This product has passed thorough quality control and test, and if this gets broken during normal use, we provide 12 months warranty service.

Model No.		
Serial No.		
Distributor		
Date you purchased		
Place you purchased		
Warranty Period		One (1) year from the date of purchase
Purchaser	**Name**	
	Address	

- Please check this warranty indication first.
- Please contact your distributor after checking out any defect in the products.
- The standard for repairing, replacement or reimbursement follows Customer.
- Warranty content any defect under normal use within the warranty service period we give you free repair service according to the warranty certificate.
- We charge you with the fee of parts and service despite of free warranty service period. Any breakage made without care such as:
  - Breakage or trouble made by natural disaster.
  - Breakage or trouble made by breaking the product guide or manual.
  - Breakage or trouble made by wrong power voltage or frequency.
  - When you want to reassemble for full system or replace parts within warranty service period.
  - When unauthorized person modified or made damage on the product trying to repair it.
- Please note that we don't support the breakage after warranty service period is expired. If the customer wants to get it repaired, we charge them with the fee.
- The specification is subject to change without prior notice for quality improvement.

Release Version 1.0

SeeEyes®

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